8.1.9.v *J 28 East*

Site Description and Existing Conditions

J 28 East is a 20-acre site located southwest of the intersection of La Media Road and Avenida de la Fuente in Otay Mesa. These vernal pools occur along a drainage near undeveloped lands, agriculture, a truck lot and open space. The site is zoned Light Industrial, is inside the MHPA and is not conserved.

Five natural vernal pools (846 m^2 [9106.268 ft^2]) were mapped at J 28 East. Huerhuero loam and Stockpen gravelly clay loam underlies the vernal pools, and upland vegetation is non-native grasslands. No sensitive species were present in 2003.

The J 28 East vernal pools were identified by the adopted Recovery Plan for Vernal Pools of Southern California (USFWS, 1998) as a necessary to stabilize populations of the following endangered and threatened species: *E. aristulatum, P. nudiuscula, N. fossalis, O. californica, B. sandiegonensis* and *S. woottoni*.

Threats

Development

J 28 East is privately owned and is not conserved.

Invasive Species

Invasive species, particularly grasses, occur in both upland and vernal pool habitats at J 28 East.

Trespass

Impacts occur from foot traffic and off-road vehicles.

Litter

The site may be impacted by wind-blown debris, litter and illegal dumping.

Fire and Fire Suppression

These vernal pools are located in a generally undeveloped area near the U.S./Mexico border. If defensible structures are developed in the future, the site may be utilized as a staging area for fire suppression vehicles in the event of a fire.

Current Management Activities

No management activities are planned or on-going.

Management Recommendations

Due to the presence of vernal pools on this site, it is recommended for conservation through public acquisition or private mitigation. However, development is not precluded; if all or portions of the site are conserved through acquisition or on-site mitigation for development, the following recommendations shall be implemented.

Restoration and/or enhancement of the vernal pools on-site are appropriate given the high species diversity recorded historically at nearby vernal pool sites. Restoration and/or enhancement actions should be focused on creating stable populations of *E. aristulatum, N. fossalis, O. californica, P. nudiuscula, B. sandiegonensis* and *S. woottoni*,

in accordance with the U.S. Fish and Wildlife Service Recovery Plan. Priority should be given to *E. aristulatum, N. fossalis, O. californica* and *P. nudiuscula*, which were historically found at this site. All reintroductions shall utilize seeds from within the smallest possible geographic range, in the following order, as necessary: complex, series, geographic region (i.e. Otay Mesa).

Fencing shall be installed to preclude access while maximizing connectivity to adjacent open space areas with lower risk of trespass. Appropriate bilingual signage shall be developed with both educational and no-trespassing elements.

A qualified biologist shall assess the site for non-native, invasive species, and shall recommend and implement a removal plan, if necessary. Weeding within and immediately adjacent to vernal pools should be done by hand. In upland areas, mechanical removal may be necessary; however, herbicides should not be used in or adjacent to vernal pools. Targeted species for removal include, but are not limited to Italian ryegrass (*Lolium multiflorum*), rabbitfoot grass (*Polypogon monspeliensis*), yard knotweed (*Polygonum arenastrum*), fennel (*Foeninculum vulgare*) and curly dock (*Rumex crispus*).

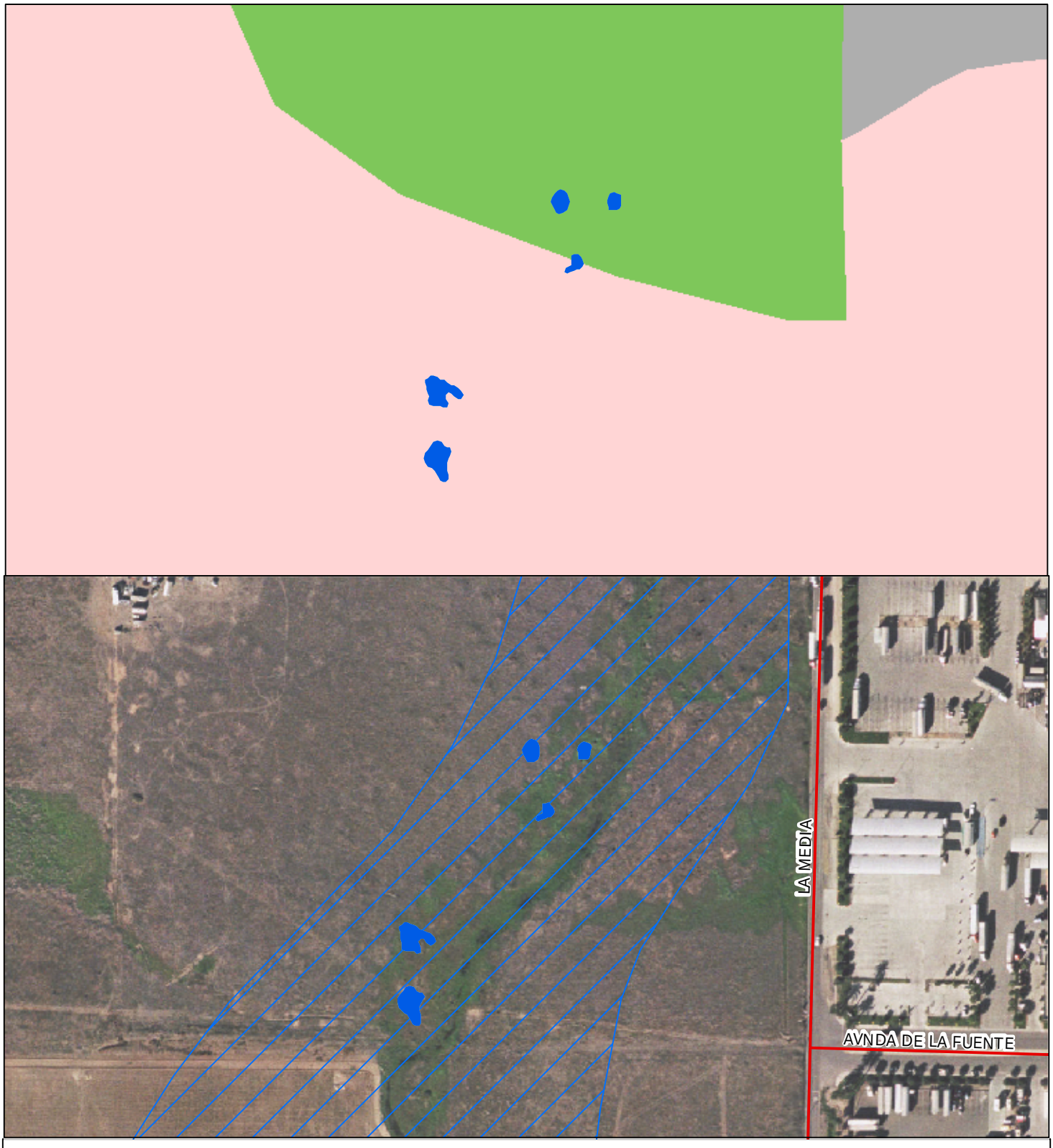
Annual maintenance shall be required to provide fence and sign repair and trash removal, as necessary. It is recommended that an endowment fund be established to fund maintenance activities in perpetuity.

If the site is used for mitigation, a fire management plan shall be prepared and included in the adopted Habitat Management Plan.

Adaptive management shall include management of the site to improve habitat conditions for native, solitary bees known as obligate pollinators for vernal pool species.

Educational programs may be provided to nearby schools, Home-Owner's Associations (HOAs), community groups, etc. at the discretion of the land manager. Topics may include the local ecosystem, including vernal pools, habitat preservation (i.e. MSCP), and should incorporate hands-on learning via neighborhood hikes, etc. Programs should strive to present information in a manner that will increase interest in the natural world and cultivate local stewardship of open space, with the overall goal of developing positive neighborhood awareness of the preserve.

Figure 64



J 28 East

Roads
MHPA
Conserved Lands
Vernal Pools at Site
Adjacent Vernal Pools
Grassland
Disturbed Land
Agriculture

0.05
Miles
Kilometers
0.1

Note: MHPA and Roads not shown in top map; vegetation mapping per Ogden 1997.

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8.1.9.w *J 29-30*

Site Description and Existing Conditions

J 29-30 is a 644-acre site located in Otay Mesa north of the intersection of Lonestar Road and La Media Road. These five privately-owned parcels are partially conserved, are partially within the MHPA, and are zoned Open Space. The area is adjacent to undeveloped lands and industrial warehouses. In 2004, Caltrans began construction on-site for the extension of SR-125, and began restoration on a vernal pool preserve in 2005. The remaining portions of the site may be affected by development.

Seventy-six vernal pools (3925.45 m^2 [0.97 acres] of basin area) were mapped at J 29-30. All vernal pools on-site are natural. The site is characterized by Stockpen gravelly clay loam on 0 to 2 percent slopes, and supports non-native grasslands with some native grasses and succulents. Sensitive species include *E. aristulatum* and *P. nudiuscula*.

The high percentage of non-native grasses may be attributed, in part, to long-term cattle grazing. Historic grading appears to have destroyed Mima mound topography in some areas.

Threats

Development

Development may directly or indirectly impact J 29-30.

Invasive Species

The site is characterized by non-native grasses that have colonized the vernal pool basins. *E. aristulatum* appears to successfully co-exist with these grass species; however, the decrease in *P. nudiscula* over the past 20 years (Bauder, 1986) may be the result of out-competition by exotic grasses.

Trespass

Off road vehicles (ORVs) have caused extensive damage to vernal pools throughout Otay Mesa. The J 29-30 vernal pools have been relatively undisturbed by ORVs due, in part, to generally level terrain and gates along property entrance roads.

Fire and Fire Suppression

The J 29-30 vernal pools are located in a currently undeveloped area. The site may serve as a staging area in the event of a fire if defensible structures are developed in the vicinity.

Required Management Activities

Pursuant to Biological Opinion 1-6-99-F-14R2, issued in regards to the impacts of State Route 125 South, the following mitigation and management activities have been required as part of the project. This mitigation is occurring on a portion of the J 29-20 site.

Restoration of 0.88 acres and preservation of 0.2 acres of vernal pool basin area are required to offset impacts to vernal pools and associated species, including spreading navarretia (*Navarretia fossalis*) and San Diego fairy shrimp (*Branchinecta*

sandiegonensis). Additional restoration of 0.32 acres of vernal pools is required by the State Regional Water Quality Control Board.

Restoration is to occur on-site and shall include minor Mima mound creation/restoration; salvage and translocation of spreading navarretia; introduction of San Diego button celery and Otay Mesa mint; inoculation with San Diego fairy shrimp; removal of topsoil and other materials from impact areas; and a five-year monitoring plan.

Funding for management actions mandated as part of these projects will be the responsibility of the developer, unless otherwise noted in the approved CEQA document(s).

Management Recommendations

The unconserved vernal pools are recommended for conservation through public acquisition or private mitigation. The site is within the MHPA and is adjacent to open space areas in the City of Chula Vista. Preserves should be sited within the MHPA and/or open space; preserve areas outside these land use designations shall be rezoned to Open Space.

This site was identified as necessary to stabilize the populations of *E. aristulatum, P. nudiuscula, O. californica, N. fossalis, B. sandiegonensis,* and *S. woottoni,* by the adopted *Recovery Plan for Vernal Pools of Southern California* (USFWS, 1998). All future management activities shall promote the stabilization and recovery of these species. Restoration and reintroduction efforts shall utilize seeds from within the smallest possible geographic range, in the following order, as necessary: complex, series, geographic region (i.e. Otay Mesa).

The vernal pools should be fenced with materials appropriate to deter both illegal immigrant traffic and off-road vehicle use. Signs, placed at appropriate intervals along the property, should include both educational and access-limiting components. The fencing and signage should be inspected on an annual basis and repaired as necessary.

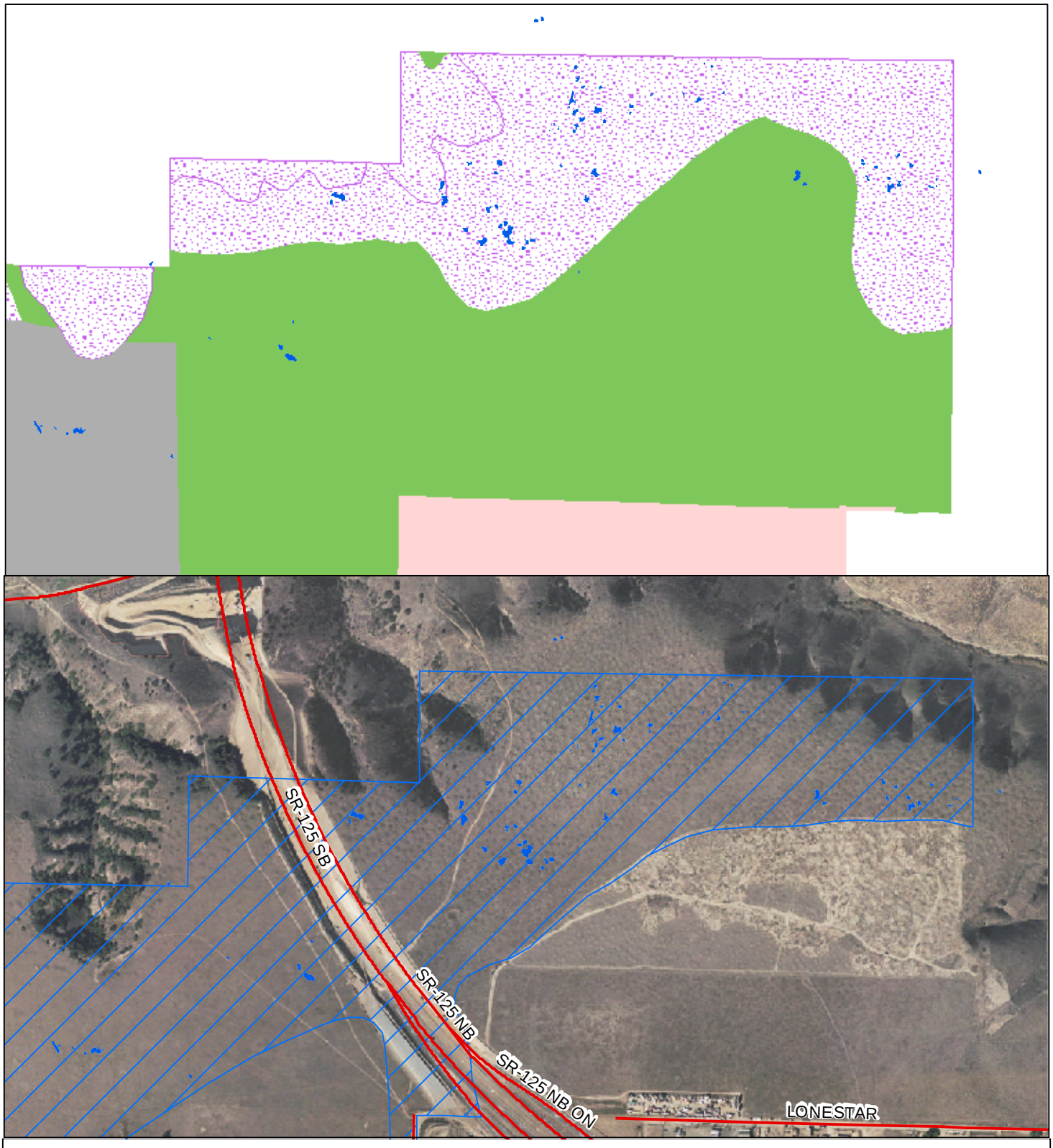
Non-native invasive plants are a major threat to the viability of vernal pool ecosystems. The functions and values of these vernal pools would be improved by a comprehensive exotic species control program. Pursuant to Biological Opinion 1-6-99-F-14R2, all weed removal activities must be conducted in a manner that will not jeopardize the Quino checkerspot butterfly; in particular, personnel shall be trained by a qualified biologist to recognize Quino caterpillars and shall not remove weeds in areas where Quino, in any life stage, are identified. Weeds may be removed by hand and/or mechanical means.

Regular litter patrols should be conducted to ensure that the vernal pools are free of trash and debris. An endowment shall be established to fund long-term maintenance and monitoring.

If the site is used for mitigation, a fire management plan shall be prepared and included in the adopted Habitat Management Plan. Adaptive management shall include management of the site to improve habitat conditions for native, solitary bees known as obligate pollinators for vernal pool species.

Due to the large area of undeveloped uplands, this site would be an appropriate location for studies of pollinator species associated with vernal pool plants. Land managers should encourage scientific research in this area as funding becomes available.

Figure 65



J 29-30

0.1
Miles
Kilometers
0.25

- Roads
- MHPA
- Conserved Lands
- Vernal Pools at Site
- Adjacent Vernal Pools
- Coastal Sage Scrub
- Grassland
- Disturbed Land
- Agriculture
- Urban/Developed
- No Data

Note: MHPA and Roads not shown in top map; vegetation mapping per Ogden 1997.

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8.1.9.x *Brown Field (J 35)*

Site Description and Existing Conditions

Brown Field (J 35) is located north of State Route 905 in Otay Mesa. The 74-acre site is owned and managed by the City of San Diego Airports Division and is partially within the MHPA. The site is zoned for airports, and adjacent land uses include the Brown Field Airport and open space. A Biological Opinion was issued for a proposed San Diego Air Commerce Center in the late 1990s (1-6-99-F-65), but the project was not granted permits by the local government and has not been built.

Two road ruts (42 m^2 total area [452.084 ft^2]) at Brown Field were mapped by the City in 2003, and an additional basin was detected during a RECON survey in 1994. The vernal pool basins are underlain by Stockpen gravelly clay loam on 0 to 2 percent slopes, and occur within non-native grassland uplands. No sensitive vernal pool species were observed in 2003; however, protocol fairy shrimp surveys conducted during project proposal for the Commerce Center were positive for both *S. woottoni* and *B. sandiegonensis*.

The high percentage of non-native grasses may be attributed, in part, to historic cattle grazing. Historic grading or agriculture may have destroyed Mima mound topography and associated vernal pool basins.

Threats

Development

As identified in the *Vernal Pool Management Plan* (City of San Diego, 1996), additional development may be proposed at Brown Field; for example, the Brown Field Air Commerce Center was proposed in the late 1990s. However, this project met with opposition which to resulted in the denial of approval by the San Diego City Council. Significant growth in the surrounding areas, especially residential developments, is expected to increase the opposition to any additional projects. A portion of the site is protected *de facto* through airport navigational easements, which exclude structures, etc.

Invasive Species

The site is characterized by non-native grasses which may be a significant factor in the lack of sensitive vernal pool plant species.

Trespass/Litter

Off road vehicles (ORVs) have caused extensive damage to vernal pools throughout Otay Mesa; in addition, immigrants traverse the mesa and impact vernal pools. Trash, dumping and litter are common in this area and may impact the vernal pools; however, these threats are minimized at Brown Field due to the high level of security required by operational airfields.

Maintenance Activities

The *Vernal Pool Management Plan* (City of San Diego, 1996) notes that impacts may occur from on-going maintenance operations such as mowing, weed abatement, pavement repair and special event parking.

Fire Suppression and Emergency Procedures

This site has the potential to be impacted due to fire suppression and/or emergency procedures (see also City of San Diego *Vernal Pool Management Plan* [1996]). The long-term impact of fire on vernal pool plants and animals appears to be minimal (see Post Fire Evaluation of Vernal Pools [City of San Diego MSCP Monitoring Report, 2004]). However, the airport, airplanes, and associated fuel and structures are a high priority during fire suppression, and vernal pools may be impacted in the course of these activities. In addition, emergencies such as plane crashes and any associated life- and property-saving procedures may damage on-site resources.

Current Management Activities

The site is currently managed for the use and safety of Brown Field Airport, and in conformance with a Storm Water Runoff Protection Plan.

Management Recommendations

The *Vernal Pool Management Plan* (City of San Diego, 1996) made the following recommendations: Investigate unidentified resources; conduct an evaluation of the vernal pools and determine restoration and enhancement potential, if any; inspect the physical conditions of the site annually; and notify the appropriate agencies during the planning stages of future development proposals.

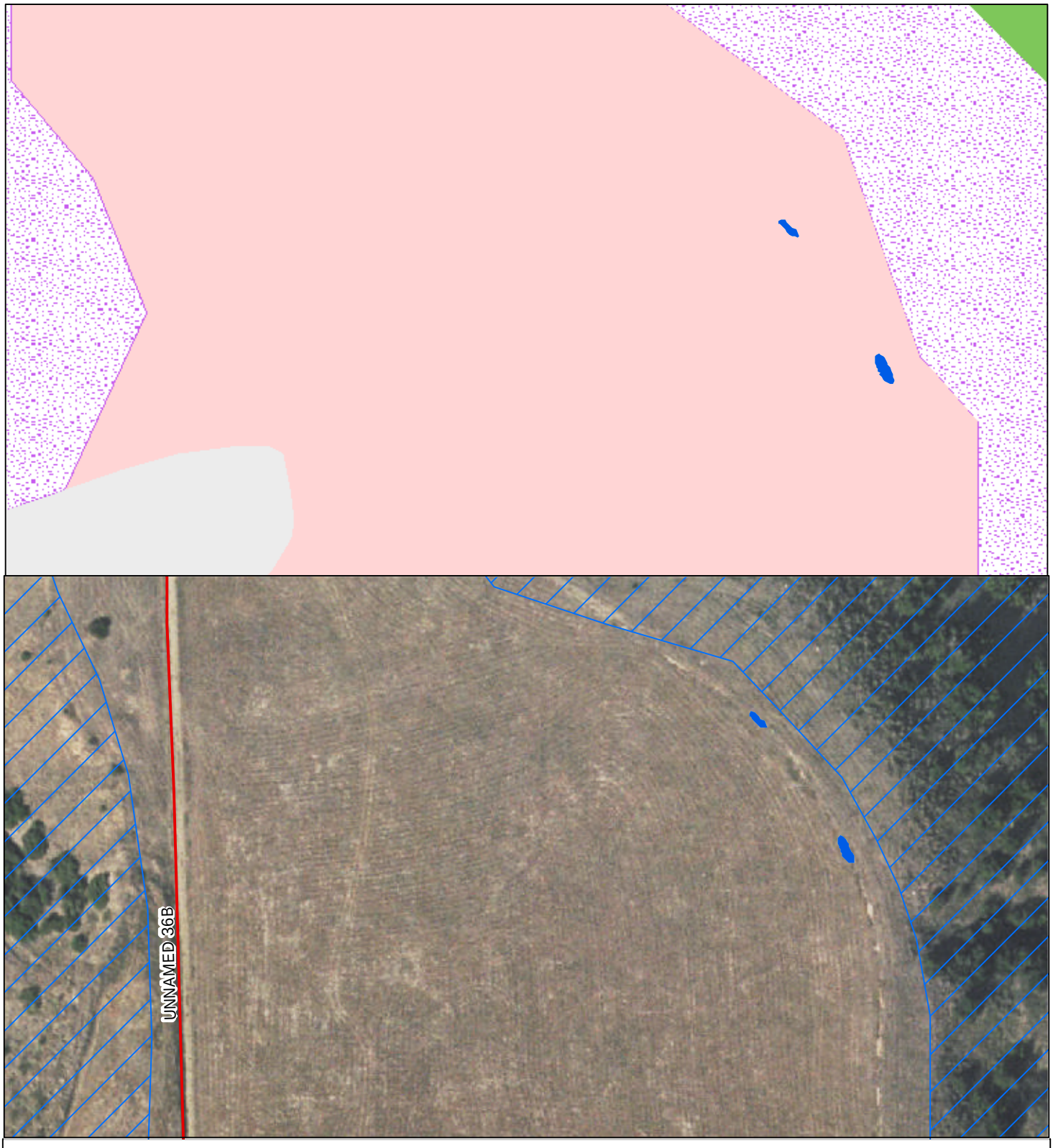
If impacts to vernal pools are approved, the mitigation should include vernal pool restoration and the preservation of on-site or off-site resources. In order to ensure long-term success, the mitigation shall include invasive species removal, fencing and signage, litter removal, monitoring and a fire management plan. The plan shall also identify both funding and a responsible party for long-term maintenance.

If an on-site vernal pool preserve is required as mitigation for future project(s), the area should be within or adjacent to the MHPA and of sufficient size and shape to protect both vernal pool basins and all associated watersheds. The site is connected to the J 29-30 vernal pools by undeveloped land within the MHPA, and preserve design should occur in a manner to maximize the connectivity between vernal pools, surrounding open space, and nearby vernal pool complexes. The applicant shall coordinate with the Park and Recreation Open Space Division to initiate the process to dedicate the preserve as City open space upon project approval.

It is likely that permitting of any future developments would require updates to the existing Biological Opinion (1-6-99-F-65), which required on- and off-site restoration and preservation of vernal pools, translocation of fairy shrimp cysts, invasive species removal, and annual monitoring.

Access for research purposes should be permitted, if consistent with use and safety procedures at Brown Field Airport.

Figure 66



Brown Field (J 35)

0.02
Miles
Kilometers
0.04

- Roads
- MHPA
- Conserved Lands
- Vernal Pools at Site
- Adjacent Vernal Pools
- Coastal Sage Scrub
- Grassland
- Disturbed Land
- Agriculture
- Urban/Developed

Note: MHPA and Roads not shown in top map; vegetation mapping per Ogden 1997.

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